REMARKS

Applicants have amended claim 8 and added new claims 15 – 23. Thus, claims 8 - 23 are pending and presented for examination. Applicant respectfully requests reconsideration and allowance of the pending claims in view of the foregoing amendments and the following remarks.

Response To Rejections Under Section 102:

The Examiner has rejected claims 8 - 14 under 35 U.S.C. § 102(e), the Examiner contending that these claims are anticipated by Shiraishi et al (USPN 6,574,961). In making this rejection, the Examiner apparently reads the aforementioned prior art as disclosing every claimed feature of Applicant's invention.

Applicants have amended claim 8 to include the limitation of mixing the exhausted exhaust gas with flushing air to produce a mixture having a λ_{ex} greater than λ_{cyl} to improve CO and HC concentrations and residual oxygen content for heating of the exhaust gas catalyst (see e.g. Applicants' specification, paragraph 54). Shiraishi does not disclose or suggest mixing the exhausted gas with flushing air to improve CO and HC concentrations and residual oxygen content for rapid heating of the exhaust gas catalyst. In contrast, Shiraishi teaches control of the temperature of a catalyser by opening a bypass control valve to introduce exhaust gas to the catalyser without passing through the blower preventing heat dissipation to the turbine to keep the catalyser temperature in the range of high cleaning efficiency (see e.g. Shiraishi specification column 11 lines 2 – 21) but not for heating. The mixing the exhausted gas with flushing air to produce a mixture having improved CO and HC concentrations is not a matter of mere design choice but will produce an exothermic reaction to rapidly heat the exhaust gas catalyst (see e.g. Applicants' specification, paragraphs 0021 – 0023).

Therefore, Applicant respectfully requests that the Examiner withdraw the Section 102 rejection.

Discussion of New Claims 15 - 23:

New claims 15 – 21 further define the scope of the invention, as described in the specification and drawings and are patentable based on their dependency from the independent claims as well as on their own merit. For example, new independent claim 18 recites setting a

lower valve lift for a plurality of gas exchange valves during cold start conditions, opening a throttle valve and pre-compressing an air charge by the blower device to increase an induction manifold pressure to produce a positive pressure drop from an inlet side to an outlet side of the internal combustion engine, setting a valve overlap of the gas exchange valves to deliver at least part of the air supplied by the blower device as flushing air directly from the inlet side to the outlet side of the internal combustion engine, injecting fuel directly into the combustion chamber after closure of the outlet valve such that the flushing air remains fuel free, combining an exhaust gas exiting the combustion chamber with the flushing air in an exhaust line to produce a mixture of exhaust gas and flushing air; and monitoring the mixture with a λ probe that provides feedback to a device to control the valve overlap such that the mixture will have a desired λ_{ex} equal to 1, whereby the mixture will cause an exothermic reaction to occur in the exhaust gas catalyst to more rapidly heat the exhaust gas catalyst. For another example, new independent claim 23 recites starting the internal combustion engine, opening a throttle valve and pre-compressing an air charge by a supercharging device, setting a valve overlap of the gas exchange valves and setting a lower valve lift to deliver at least part of the pre-compressed air charge delivered by the supercharging device as flushing air directly from the inlet side to the outlet side of the internal combustion engine and mixing the flushing air with a volume of exhausted gas, the exhausted gas having a λ_{cyl} less than 1, to produce a mixture such that the mixture has a λ_{ex} that approaches 1 in value, and flowing the mixture to the exhaust gas catalyst to produce an exothermic reaction. Applicants respectfully submit that claims 15 - 23 are patentable and respectfully request allowance of claims 15 - 23.

Conclusion

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims and specification. Accordingly, Applicants respectfully request that the Examiner reconsider the rejections and timely pass the application to allowance. Please grant any extensions of time required to enter this paper. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

Dated: 6/8/06

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